Class VI UIC Alternative PISC Timeframe Demonstration

This submission is for:

Project ID: R05-IN-0001

Project Name: Wabash Valley Resources

Current Project Phase: Pre-Injection Prior to Construction

Computational Modeling

Proposed Alternative PISC Timeframe: 4 years

Number of Items to be Submitted: 3

Item #1

Requirement(s) Addressed by this Item:

Pressure decline timeframe Plume migration rate

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: PISC_SC_Template, 4/20/21 Contains description of pressure declince timeframe and plume migration rate within the Alternative PISC Timefram section

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #2

Requirement(s) Addressed by this Item:

Computational modeling results

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: AoR_CA_Template, 4/20/2021 Contains the results of the computatnional modeling pursuant to the delineation of hte area of the review

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #3

Requirement(s) Addressed by this Item:

CO2 trapping processes CO2 trapping rate Analyses, studies, research

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: 146.82a_Narrative_Template, 4/20/2021 Contains the description of the site specific processes that result in carbon dioxide trapping, predicted rate of trapping and the results of laboratory analysis and research studies.

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Potential Conduits

Number of Items to be Submitted: 4

Item #1

Requirement(s) Addressed by this Item:

Confining zone characterization Potential fluid movement conduits Well construction

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Confining Zone Characterization - see Narrative Template - Section Confining Zones Pages 4-14, Figures 1, 2, 3, 6; Section Faults and Fractures - Pages 17-21, Figures 10, 11, 12, 13, 14; Section Inject and Confing Zone Details Pages 21-45, Table 4, Figures 15 and 33; Section Geo-Mechanical and Petrophysical Information Pages 45-51, Tables 6, 7, 8, 9, Figures 34, 35, 36, 37. Submitted 4/21/2021 Potential Fluid Movement Conduits/Well Construction - See Narrative Template - Section Injection Well Consruction Pages 79-84, Figure 49, Tables 15, 16, 17 Submitted 4/21/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #2

Requirement(s) Addressed by this Item:

Potential fluid movement conduits

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Potential Fluid Movement Conduits - see AoR CA Template Section Tabulation of Wells Within the AOR, Pages 32-34, Table 10, Figure 21 Sumbitted 4/21/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #3

Requirement(s) Addressed by this Item:

Potential fluid movement conduits

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Wells in AOR, see Well Talley Workbook submitted 4/21/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #4

Requirement(s) Addressed by this Item:

Injection zone - USDW distance

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Injection Zone-USDW Distance - See PISC_SC_Template Section Location of USDWS, Pages 28-29 Submitted 4/21/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Data Quality

Number of Items to be Submitted: 4

Item #1

Requirement(s) Addressed by this Item:

Analyses and tests Calibrated models Estimation techniques Conservative values and assumptions

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Analyses and Tests - See Narrative Template Section Faults and Fractures, pages 17 through 21 Figures 10, 11, 12, 13 and 14; Narrative Section Template Section Injection and confining zone properties, pages 22 through 44 Table 4 and 5, Figures 15 through 33; Narrative Section Geo-mechanical and Petrophysical characterisitics of the confining zone, pages 45 through 51, Tables 6 through 9, Figures 34 through 37; Narrative Section Geochemistry, pages 70 through 74, Table 12 as submitted 4/30/2021 Estimation Techniques - See Narrative Template Section Geo-mechanical and Petrophysical Information, Pages 45 through 48, Tables 6 through 9 as submitted 4/30/2021 Calibrated Models - See Narrative Template Section Geochemistry, Page 71, 72 through 74, Table 12; As submitted 4/30/2021 Conservative values and assumptions - See Narrative Template Section Injection and Confining Zone Details, Page 22 as submitted 4/30/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #2

Requirement(s) Addressed by this Item:

Estimation techniques Conservative values and assumptions Appropriate models

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Conservative Values and assumptions - See AoR_CA Template Section Porosity and Permiability Pages 15 through 16 as submitted 04/30/2021 Estimation Techniques - See AoR_CA Template Section Constitutive Relationships and Other Rock Properties Page 19 as submitted 04/30/2021 Appropriate Models - See AoR_CA Template Section Computational Modeling Approach Page 2; AoR_CA Template Section Model Domain, Page 13; AoR_CA Template Section GeoCellular model, Page 16 through 19, Figures 11 and 12; Aor_CA Template Section Initial Conditions, Page 20, Table 5; Aor_CA Template Section Operatoinal Information, Page 20, Table 6 as submitted 4/30/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #3

Requirement(s) Addressed by this Item:

Uncertainty analysis

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: Uncertainty Analysis - See PISC_SC Template Section Computational Modeling Results, Page 10 through 19, Figures 6 through 14

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Item #4

Requirement(s) Addressed by this Item:

QA/QC plan

Are you Using References to Previously Submitted Materials to Fulfill the Selected Requirement?: Yes

Reference Description: See Quality Assurance and Surveillance Plan as submitted 4/30/2021

Are you Submitting New Files to Fulfill the Selected Requirement?: No

Complete Submission

Authorized submission made by: Rory Chambers

For confirmation a read-only copy of your submission will be emailed to: rchambers@wvresc.com